FIG. 1

DATA → CONVOLUTIONAL ENCODER → INTERLEAVER → M-ARY ORTHOGONAL MODULATOR → FADING CHANNEL → M-ARY ORTHOGONAL DEMODULATOR → DEINTERLEAVER → MAP DECODER →

CHANNEL ESTIMATOR

FIG. 2

DATA	HADMARD SYMBOL (M=4)
00	++++
01	+-+-
10	++--
11	+--+

TO GENERALIZE FOR $M=2^b$

$$H_M = \begin{bmatrix} \overline{H}_{M/2} & H_{M/2} \\ H_{M/2} & -H_{M/2} \end{bmatrix}$$
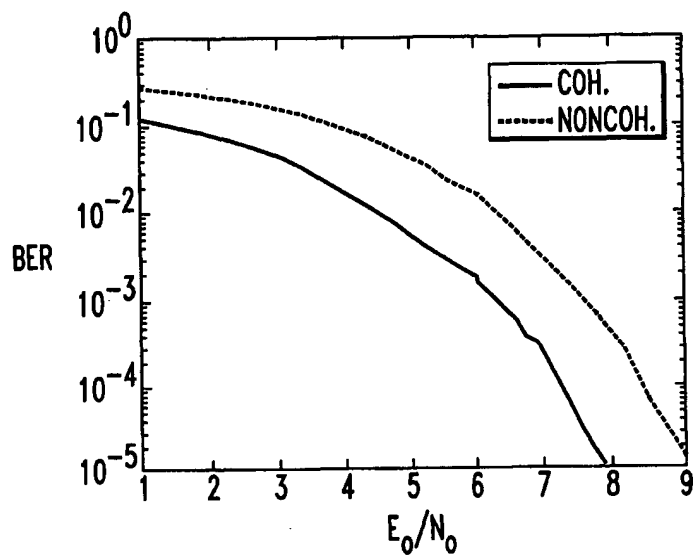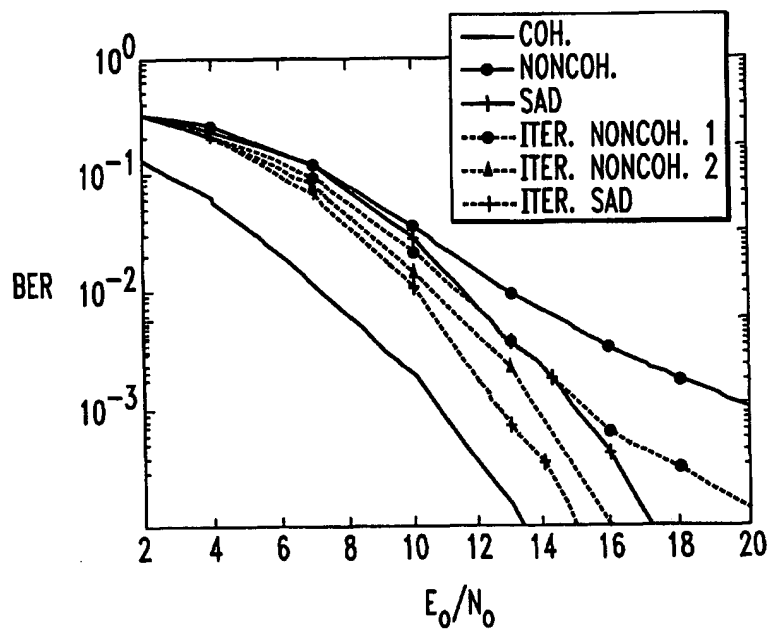
FIG. 3
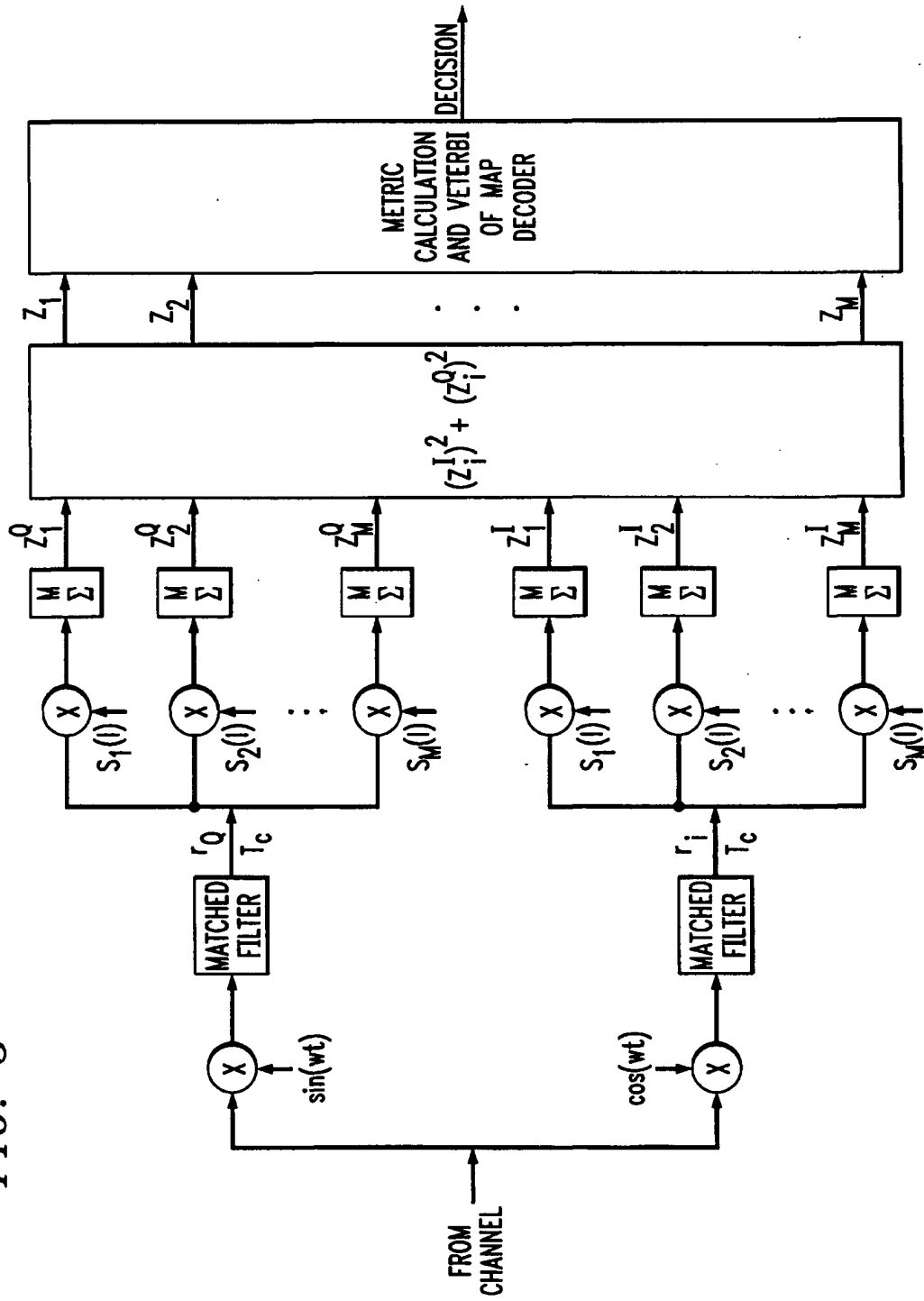
FIG. 4
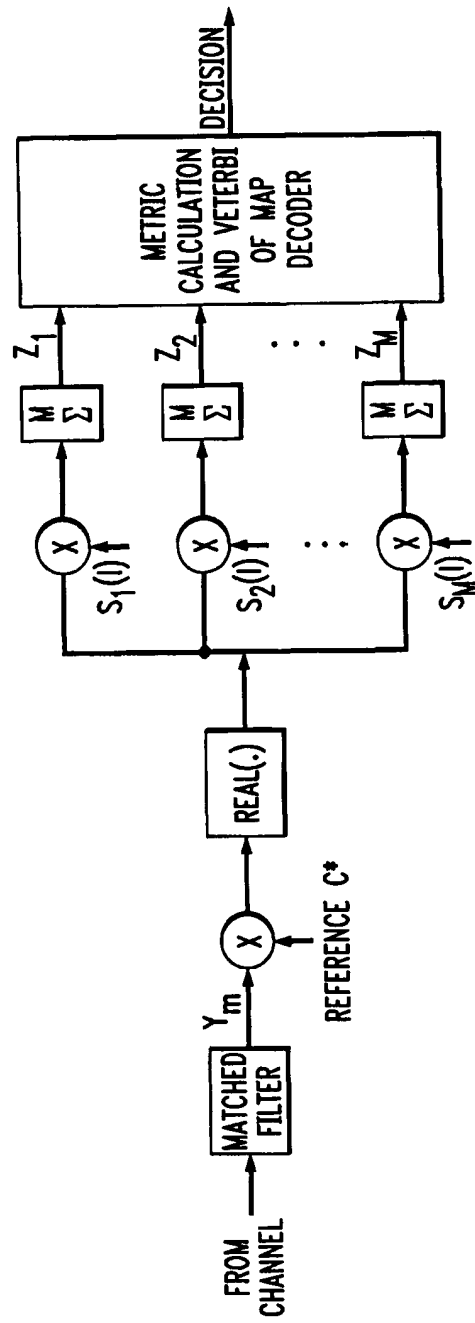
FIG. 5

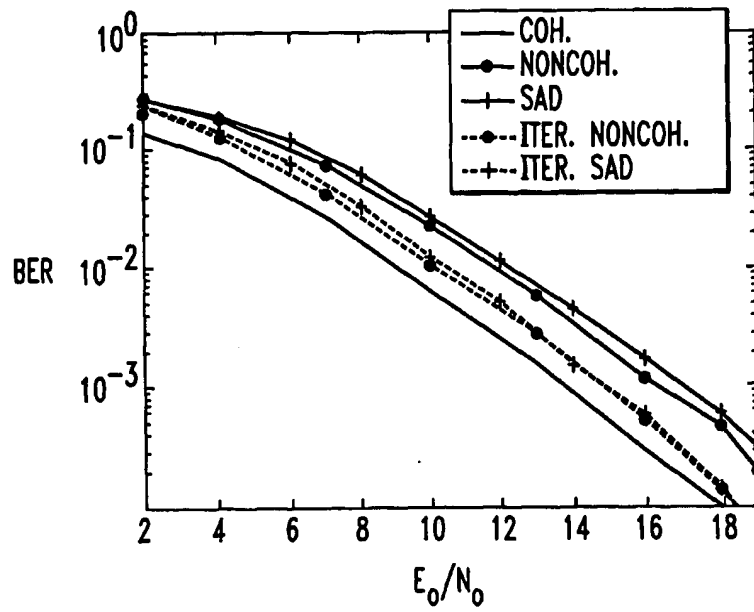

FIG. 6

FIG. 7
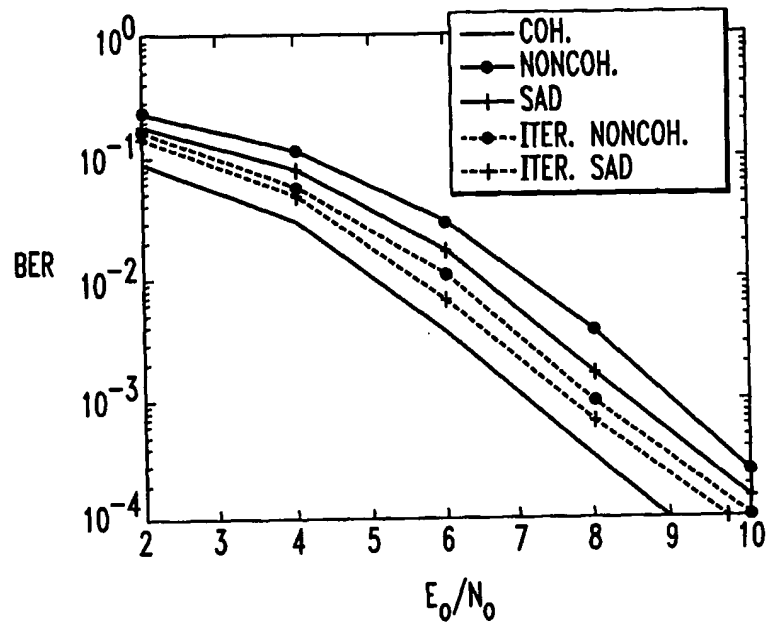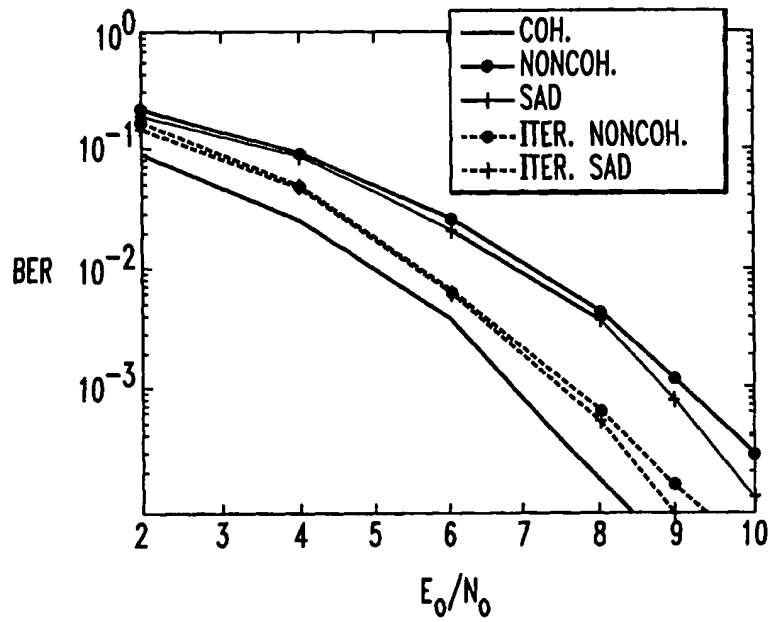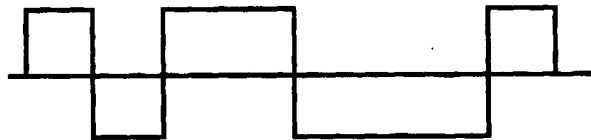

FIG. 8
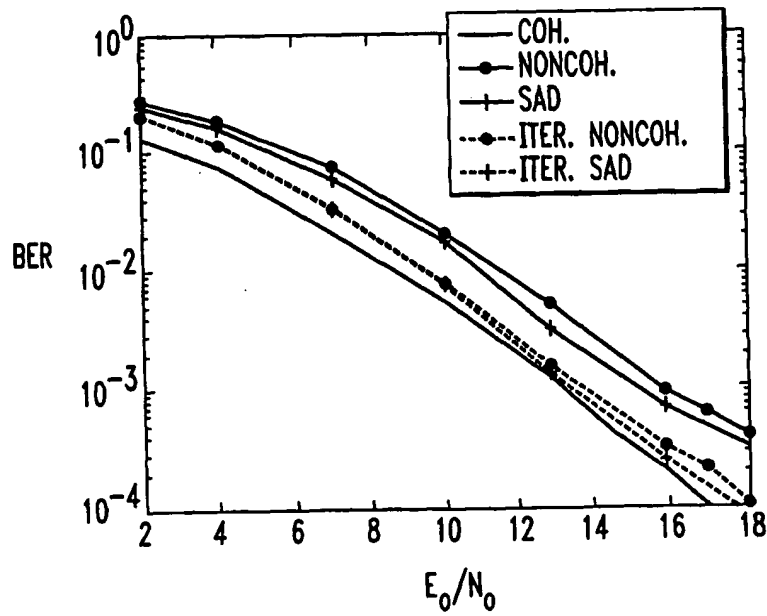
FIG. 9
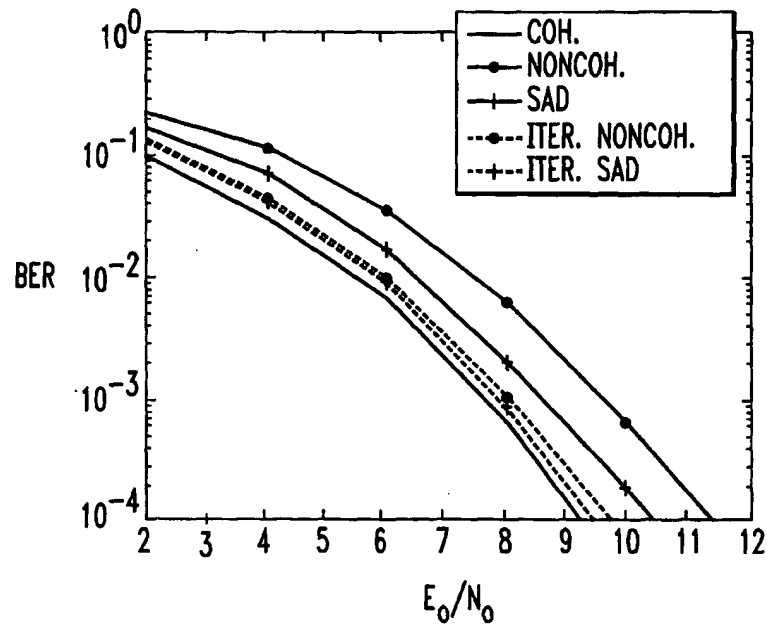
FIG. 10
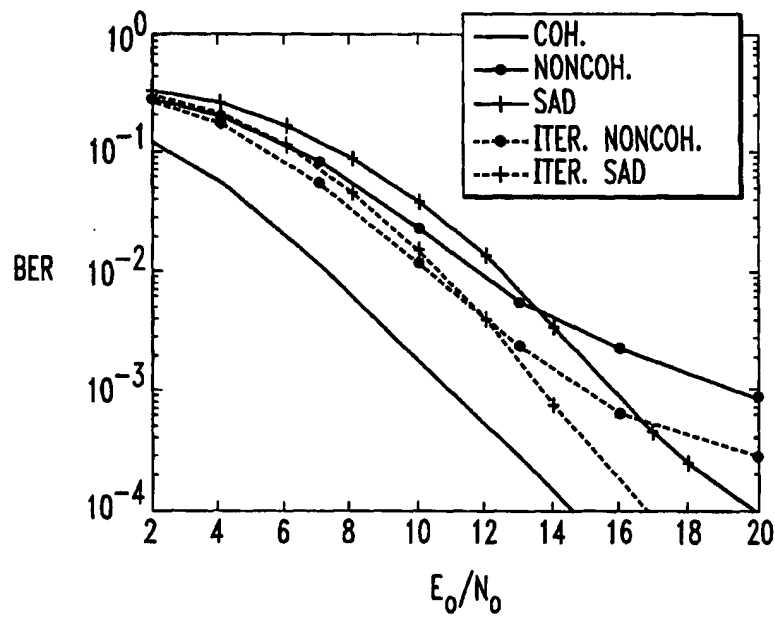
FIG. 11
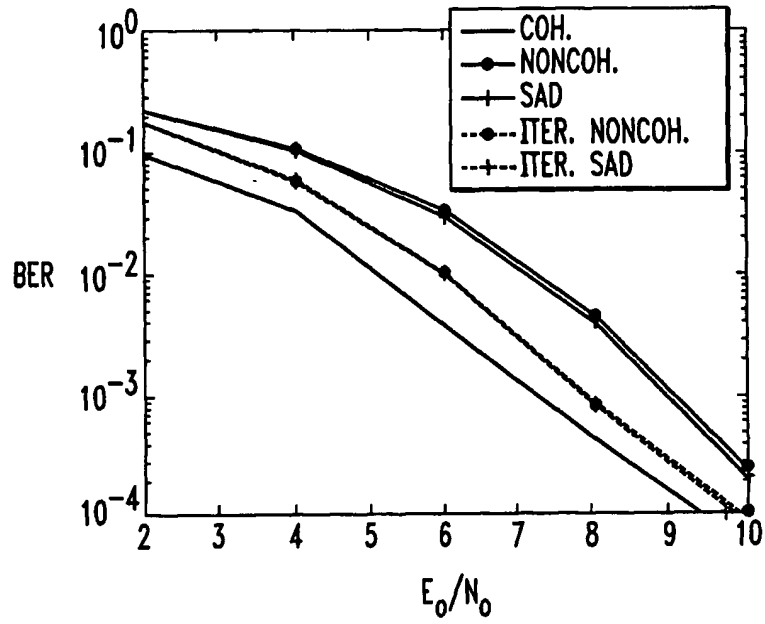
FIG. 12

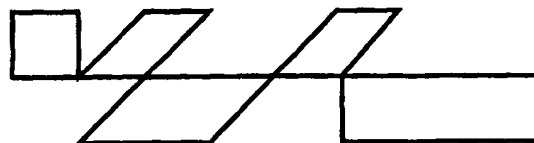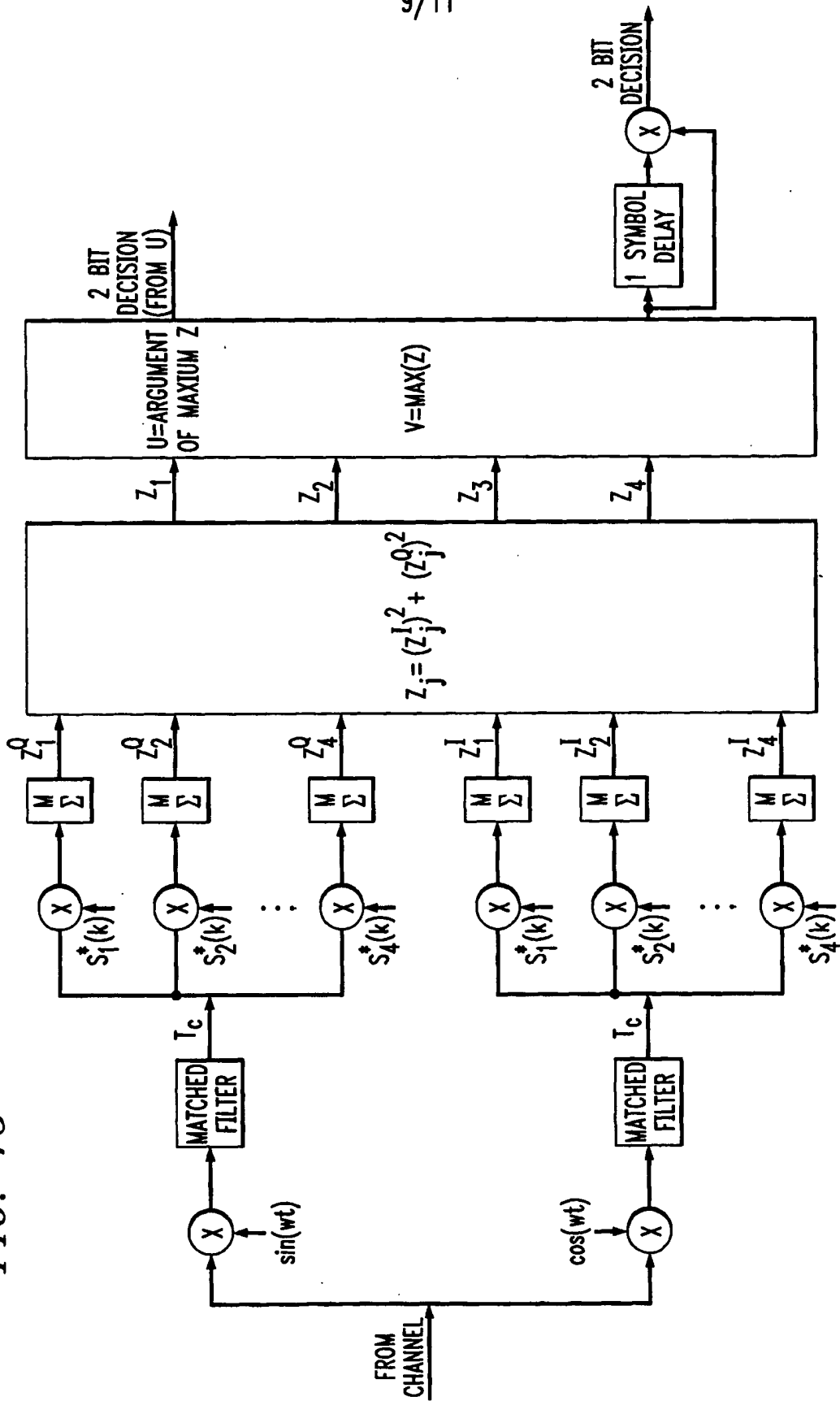## FIG. 13

FIG. 14

8 BPSK CHIPS 256 CODEWORDS (MOK)

8 QPSK CHIPS 65536 CODEWORDS (CCK)

FIG. 15

FIG. 16

FIG. 17

FIG. 18

FIG. 18

FIG. 19

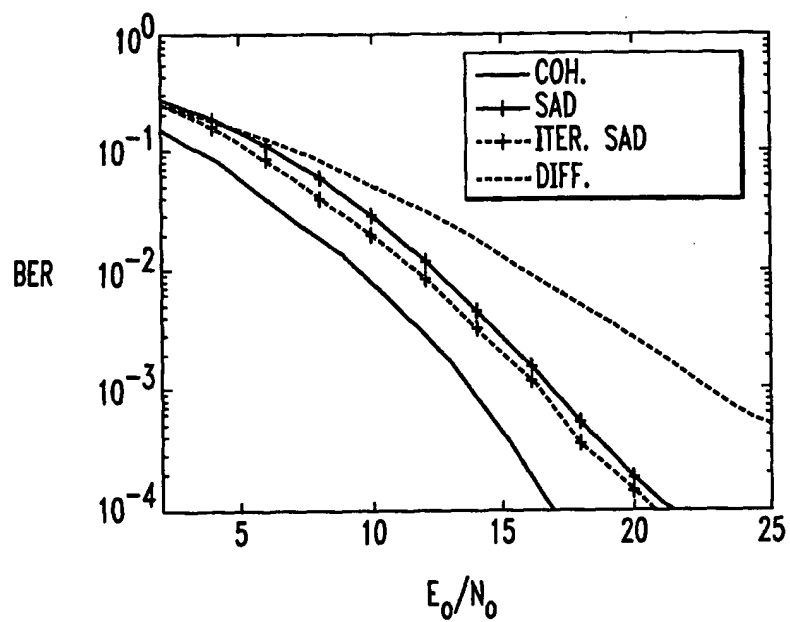FIG. 19